

REMARKS

Claims 1, 3 and 5-7 are presently pending in the application. Claims 9-24 were added in a previous amendment, but were subjected to a restriction requirement and thus will be pursued in a separate divisional application. The Examiner has rejected claims 1, 3 and 5-7 under 35 U.S.C. §112 ¶1 for failing to comply with the written description requirement because "[t]he claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention." (Office Action at 2, paragraph 3). Specifically, the Examiner asserts that the limitations in the multiconductor cable such that it "' may be coiled and uncoiled in response to a change from the first configuration to the second configuration' and ' the uncoiled portion of the multiconductor cable is at least approximately the distance between the first row of seats and the second row of seats' " are not supported by the originally filed disclosure.

In response, Applicant respectfully submits that the inventors did specifically recognize the problem of clutter created by uncoiled multiconductor cables as an aircraft is reconfigured, i.e., row being moved relative to one another from a first configuration to a second configuration. As the published application (US 2007/0262185A1) notes, the present invention is specifically directed towards enabling the vehicle (e.g., aircraft) operators to change the distance between rows of seats without having to install a new cabling system having a different length of cable:

[0005] In some transports, particularly in commercial aircraft, it is often desirable to change the distance between the rows of seats to configure the aircraft for a different flight routing or purpose. Unfortunately, because the rows of seats are often electrically coupled to each other using fixed length cables, a change (e.g., an increase) in seat row spacing typically requires replacement of the existing fixed length cables with fixed length cables having an appropriate length. Of course, changing seat-to-seat cabling is a time consuming and expensive process. In addition, many aircraft manufacturers and commercial airline companies do not maintain a sufficient or complete stock (or in some cases any stock) of different length cable assemblies. As a result, the

(US 2007/0262185 A1, p.1, para. 0005). The application of the present invention further notes a prior solution to this need, and then contrasts that approach with the teachings of the present invention. That is, prior approaches simply looped or placed extra cabling under a seat so that "rows of seats [can] be moved apart without having to replace the cable assemblies[.]" which created safety and/or electrical hazards, while the present adjustable length cable system uses a spool or reel for manually coiling and uncoiling the multiconductor cable as the seat rows are being reconfigured:

[0016] FIG. 2 depicts a known manner in which fixed length cable assemblies are used to provide power, data and other signals to aircraft seats and to electrically couple one row of seats to another. As shown in FIG. 2, cables having extra length are used to enable the rows of seats to be moved apart without having to replace the cable assemblies. However, as depicted in FIG. 2, the extra length of cabling is loosely placed underneath the seat and, as a result, presents a potential hazard and/or failure if the excess cabling is dislodged and falls onto the floor underneath the seat.

[0017] FIG. 3 depicts an example adjustable length cable system. The example system depicted in FIG. 3 includes a cable storage unit 300 and a cable assembly 302 having connectors or terminations 304, 306, 308 and 310. The cable storage unit 300 includes a spool or reel 312 upon which a

(US2007/0262185A1 at ¶¶16-17). This disclosure plainly supports that the inventors recognized their invention as a solution to the problem of using a single cabling system for multiple configurations between rows of seats (e.g., the rows being closer together or further apart). Of course, in order for the adjustable length cable system to work in that manner, the cable would have to be long enough to traverse the distance between the two rows of seats, i.e., "at least approximately the distance between the first row of seats and the second row of seats." Thus, the Applicant respectfully submits that the inventors did have these limitations in their possession as of the filing date of their application, and that such limitations are supported by the disclosure as filed, as shown by example above. Thus, Applicant respectfully requests reconsideration of this rejection.

Next, the Examiner has rejected claims 1, 3 and 5-7 based upon a new combination of Lee (US 2007/0262185 A1) in view of Martin (US 4,856,738) to assert that the present invention as claimed would have been obvious to a person of skill in the art. Respectfully, the Applicant submits that Lee does not teach or suggest the claimed invention, and that even if one of skill could adapt Lee to house a multiconductor cable as claimed, that modified version of Lee still would not teach a cable storage unit as taught and claimed by the present invention. Martin does no better – it, like Lee, makes no teaching of how to store or operate a multiconductor cable as claimed. Even worse, Martin makes no mention of any need to connect cabling between rows of seats, much less suggesting how such connection would be made. In that regard, Applicant notes that the Examiner's reliance upon Martin does not suggest that that reference teaches cabling connections of any kind.

Applicant respectfully submits that the Lee reference neither teaches each and every element of independent claim 1, nor does it teach elements arranged as required in the presently pending claims. Lee relates to "an apparatus for connecting a laptop computer to a communications network." (Pg. 1, ¶5). According to Lee, "The cord reel assembly 14 is configured for mounting within a headrest of a passenger seat." (Pg. 1, ¶12). As such, it is not a "multiconductor cable" as required by the present claims, i.e., it is a cord for conducting electricity to and from a single device, e.g., a laptop for a single user.

However that may be, Lee also fails to teach a mechanism whereby an aircraft operator could manually coil and uncoil a multiconductor cable, e.g., through winding or manual pushing of the cable into or from the storage unit. As the specification of the published application teaches, the present invention is focused upon using a reel or similar mechanism for an operator to manually coil or uncoil the multiconductor cable:

[0018] In operation, the effective length of the adjustable cabling system shown in FIG. 3 may be changed by rotating the reel 312 relative to the housing 314. In the example of FIG. 3, rotating the reel 312 clockwise reduces the effective (e.g., overall) length of the cabling system and rotating the reel 312 counter-clockwise increases the effective length of the cabling system.

[0019] FIG. 4 depicts another example adjustable length cable system. Similar to the example adjustable cabling system depicted in FIG. 3, the example adjustable cabling system of FIG. 4 includes a cable storage unit 400 and a cable assembly 402 having connectors or terminations 404, 406, 408 and 410. In contrast to the example system of FIG. 3, the cable storage unit 400 depicted in FIG. 4 does not include a reel or spool to enable rotatable retraction and/or extension of a length of the cable assembly. Instead, the storage unit 400 provides an internal chamber into which additional length of the cable assembly 402 may be disposed (e.g., by manually pushing a length of the cable assembly 402 into the chamber) and/or extracted (e.g., again by manually pulling a length of the cable assembly 402 from the chamber).

(US2007/0262185A1 at ¶¶18-19). By contrast, Lee teaches a mechanism (like typical modern aircraft telephone handset cords) which automatically retracts into a reel assembly once the user has ceased use of the electronic device:

When a passenger wishes to connect his or her laptop to the network, he or she pulls the connector 34 outward from the top 112 of the headrest 104 and connects the connector 34 to the laptop. When the passenger wishes to disconnect the laptop from the network, he or she disconnects the connector 34 and releases it for retraction into the housing 26 in the headrest 104. The cover plate 108 keeps the connector 34 from retracting to an unreachable position within the top of the headrest 104 and stabilizes the user interface 30 relative to the headrest 104 as the cord 18 is pulled and/or retracted.

(Lee, col., 3, lines 4-14). In other words, Lee teaches a cord assembly which "releases" – i.e., automatically retracts – into an assembly. Lee fails to teach or suggest a cable storage unit as claimed, i.e., for manually coiling or uncoiling a multiconductor cable between rows of seats. Nor does anything suggest the interchangeability between the cord assembly of Lee and the cable storage unit of the present invention – the cord tension resulting from cord reel such as Lee suggests would create safety (e.g., tripping) hazards in a row to row configuration as required by the present claims, and its automatic retraction mechanism would frustrate aircraft installers wishing to make minor adjustments in the amount of slack in the multiconductor cable.

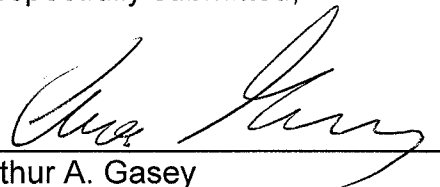
In other words, the claimed "multiconductor cable housing unit," unlike the cable for a single laptop computer in Lee, could not use the cord reel mechanism mentioned in Lee to practice the invention. Nor does Lee teach or suggest enabling an operator manually adjustable (as opposed to a automatically passenger retracted) electrical

connector. Nor does Lee teach or suggest a manually adjustable multiconductor cable length in response to an operator selected configuration of rows. For all of these reasons, Applicant asserts that Lee does not make obvious the present invention. Accordingly, Applicant respectfully requests the Examiner's withdrawal of the rejections based on Lee and Martin.

CONCLUSION

In view of the foregoing amendments and remarks, the Applicants respectfully request reconsideration and allowance of the pending claims, nos. 1, 3, and 5-7. The Commissioner is hereby authorized to charge any fees with respect to this communication to Deposit Account No. 14-1131.

Respectfully submitted,



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Dated: August 22, 2011

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